

CLAIMS

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3 What is claimed is:

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5 Claim 1. A chemiluminescent reactant composition
6 comprising:

7 a chemiluminescent reactant solution and a first
8 particulate polymeric resin in amounts effective to yield a
9 slurry upon admixture thereof; and

10 a second particulate polymeric resin in admixture with
11 said slurry in an amount effective to yield a fluidizable
12 solid admixture.

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14 Claim 2. The composition of claim 1, wherein said
15 fluidizable solid admixture is deagglomerated.

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17 Claim 3. The composition of claim 1, wherein said
18 fluidizable solid admixture is cured.

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20 Claim 4. The composition of claim 1, wherein said
21 fluidizable solid admixture is molded to form a specific
22 shape.

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2 Claim 5. The composition of claim 1, wherein said
3 first particulate polymeric resin is a polyvinyl chloride.

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5 Claim 6. The composition of claim 1, wherein said
6 second particulate polymeric resin is a polyvinyl chloride.

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8 Claim 7. The composition of claim 6, wherein said
9 second particulate polymeric resin is porous.

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11 Claim 8. The composition of claim 6, wherein said
12 second particulate polymeric resin has a mean particle size
13 distribution sufficient to provide said fluidizable solid
14 adixture.

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16 Claim 9. The composition of claim 8, wherein said
17 second particulate polymeric resin has an average particle
18 size of about 125 microns.

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20 Claim 10. The composition of claim 1, wherein said
21 slurry is of a uniform dispersion.

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1 Claim 11. The composition of claim 1, wherein said
2 chemiluminescent reactant solution comprises an oxalate.

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4 Claim 12. The composition of claim 1, wherein said
5 chemiluminescent reactant solution comprises an activator.

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7 Claim 13. A chemiluminescent composition comprising:
8 a first chemiluminescent reactant component including a
9 chemiluminescent reactant solution and a first particulate
10 polymeric resin in amounts effective to yield a slurry upon
11 admixture thereof and a second particulate polymeric resin
12 in admixture with said slurry in an amount effective to
13 yield a fluidizable solid admixture; and
14 a second chemiluminescent reactant component;
15 wherein contact between said first and second
16 chemiluminescent reactant components will result in
17 generation of chemiluminescent light.

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19 Claim 14. The composition of claim 13, wherein said
20 fluidizable solid admixture is deagglomerated.

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1 Claim 15. The composition of claim 13, wherein said
2 fluidizable solid admixture is cured.
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4 Claim 16. The composition of claim 13, wherein said
5 fluidizable solid admixture is formed into a specific shape.
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7 Claim 17. The composition of claim 13, wherein said
8 first particulate polymeric resin is a polyvinyl chloride.
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10 Claim 18. The composition of claim 12, wherein said
11 second particulate polymeric resin is a polyvinyl chloride.
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13 Claim 19. The composition of claim 18, wherein said
14 second particulate polymeric resin is a porous polyvinyl
15 chloride.
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17 Claim 20. The composition of claim 18, wherein said
18 second particulate polymeric resin has a mean particle size
19 distribution sufficient to provide said fluidizable solid
20 admixture.
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1 Claim 21. The composition of claim 13, wherein said
2 slurry is of a uniform dispersion.

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4 Claim 22. The composition of claim 13, wherein said
5 first chemiluminescent reactant component includes an
6 oxalate and said second chemiluminescent reactant component
7 includes an activator.

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9 Claim 23. The composition of claim 13, wherein said
10 first chemiluminescent reactant component includes an
11 activator and said second chemiluminescent reactant
12 component includes an oxalate.

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14 Claim 24. The composition of claim 13, wherein said
15 generation of light includes at least one distinct
16 wavelength or color.

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18 Claim 25. The composition of claim 13, wherein said
19 fluidizable solid admixture is controllably activated.

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21 Claim 26. A process for the production of a
22 chemiluminescent reactant composition, comprising:

1 admixing a chemiluminescent reactant component with a
2 first particulate polymeric resin in an amount effective to
3 yield a slurry;
4 admixing a second particulate polymeric resin with said
5 slurry, in an amount effective to yield a fluidizable solid
6 admixture.

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8 Claim 27. The process of claim 26, wherein said first
9 particulate polymeric resin is a polyvinyl chloride.

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11 Claim 28. The process of claim 26, wherein said second
12 particulate polymeric resin is a polyvinyl chloride.

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14 Claim 29. The process of claim 28, wherein said second
15 particulate polyvinyl chloride is porous.

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17 Claim 30. The process of claim 28, wherein said second
18 particulate polyvinyl chloride has a mean particle size
19 distribution sufficient to provide said fluidizable solid
20 admixture.

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2 Claim 31. The process of claim 26, wherein said slurry
3 is of a uniform dispersion.

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5 Claim 32. The process of claim 26, wherein said
6 fluidizable solid admixture is cured.

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8 Claim 33. The process of claim 26, wherein said first
9 chemiluminescent reactant component includes an oxalate.

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11 Claim 34. The process of claim 26, wherein said first
12 chemiluminescent reactant component includes an activator.

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14 Claim 35. The process of claim 26, wherein said
15 fluidizable solid admixture is deagglomerated.

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17 Claim 36. The process of claim 26, wherein said
18 fluidizable solid admixture is formed into a specific shape.

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1 Claim 37. A multi-dimensional chemiluminescent device
2 comprising:

3 at least one first chemiluminescent reactant
4 composition including a first chemiluminescent reactant
5 component having a first particulate polymeric resin in an
6 amount effective to yield a slurry and second particulate
7 polymeric resin admixed to said slurry in an amount
8 effective to yield at least one fluidizable solid admixture;

9 wherein said at least one fluidizable solid admixture
10 is dispersed within a multi-dimensional container, whereby
11 densification of said fluidizable solid admixture causes
12 formation of said multi-dimensional chemiluminescent device;
13 whereby contacting said device with a second
14 chemiluminescent reactant component will result in
15 generation of chemiluminescent light.

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17 Claim 38. The composition of claim 37, wherein said
18 fluidizable solid admixture is deagglomerated.

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20 Claim 39. The device of claim 37, wherein said
21 fluidizable solid admixture is cured.

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1 Claim 40. The device of claim 37, wherein said
2 fluidizable solid admixture is formed into a specific shape.

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4 Claim 41. The device of claim 37, wherein said first
5 particulate polymeric resin is a polyvinyl chloride.

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7 Claim 42. The device of claim 37, wherein said second
8 particulate polymeric resin is a polyvinyl chloride.

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10 Claim 43. The device of claim 42, wherein said second
11 particulate polyvinyl chloride is porous.

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13 Claim 44. The device of claim 42, wherein said second
14 particulate polyvinyl chloride resin has a mean particle
15 size distribution sufficient to provide said fluidizable
16 solid admixture.

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18 Claim 45. The device of claim 37, wherein said slurry
19 is of a uniform dispersion.

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21 Claim 46. The device of claim 37, wherein said first
22 chemiluminescent reactant component includes an oxalate and

1 said second chemiluminescent reactant component includes an
2 activator.

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4 Claim 47. The device of claim 37, wherein said first
5 chemiluminescent reactant component includes an activator
6 and said second chemiluminescent reactant component includes
7 an oxalate.

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9 Claim 48. The device of claim 37, wherein said
10 generation of light includes at least one distinct
11 wavelength or color.

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13 Claim 49. The device of claim 37, wherein said
14 densification provides a means to controllably activate said
15 fluidizable solid admixture.

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17 Claim 50. The device of claim 37, wherein said
18 densification of said fluidizable solid admixture is by a
19 molding technique, wherein a hollow object is formed.

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